

Conference Call Objectives



Hoary Bat (*Lasiurus cinereus*)

- 1) I&M Program Background
- 2) Network Inventories Status
- 3) Vital Signs Monitoring
- 4) Discuss and approve Network Charter



I&M in the Northeast

LONG-TERM GOAL:
Implement ecological monitoring in the 4 Northeast Networks

SHORT-TERM GOALS:
Complete baseline inventories
Design monitoring programs
Make information available



Funding sequence for NER Networks

Network	2001	2002	2003	2004	2005
NCBN	X				
NETN		150K	X		
ERMN			150K	X	
MIDA			150K		X

Northeast Temperate Parks Network



Dusky Salamander (*Desmognathus fuscus*)

**10 Parks in
7 states
covering
~ 56,000 acres
with
4.6 million visits/yr
and
880 miles of the
Appalachian trail**

Northeast Temperate Parks Network



American Toad (*Bufo americanus*)

- 1) Acadia NP, ME
- 2) Boston Harbor Island NPA, MA
- 3) Marsh-Billings-Rockefeller NHP, VT
- 4) Minute Man NHP, MA
- 5) Morristown NHP, NJ
- 6) Roosevelt-Vanderbilt NHS, NY
- 7) Saint-Gaudens NHS, NH
- 8) Saugus Iron Works NHS, MA
- 9) Saratoga NHP, NY
- 10) Weir Farm NHS, CT
- 11) Appalachian Trail, ME-PA

National Park Service Northeast Temperate Parks



12 Baseline Inventory Datasets

- *Natural resource bibliography*
- Base cartographic data
- Geology map
- Soils map
- Weather data
- Air quality
- Location of air quality monitoring stations
- Water body location and classification
- Water quality data
- *Vegetation map*
- *Species list of vertebrates and vascular plants*
- *Distribution and status of high priority species*



Inventory Status for NETN

Northeast Temperate Network	NPSpecies	Avian Surveys	Fish Surveys	Herp Surveys	Mammal Surveys	Vegetation Mapping
Acadia (ACAD)	Yes	2001	2001	2001	2003	DONE
Appalachian Trail (APPA)						
Boston Harbor Islands (BOHA)		2002			2003	2003
Marsh-Billings-Rockefeller (MABI)	Yes	2001	2001	2002	2003	2003
Minute Man (MIMA)	Yes	2002	2001	2001	2003	2003
Morristown (MORR)	Yes	2002	2001	2000	2003	2001
Roosevelt-Vanderbilt (ROVA)	Yes	2002	2001	2001	2003	2002
Saint-Gaudens (SAGA)	Yes	2001	2001	2001	2003	2003
Saugus Iron Works (SAIR)	Yes	2002	2001	2002	2003	2003
Saratoga (SARA)	Yes	2002	2001	2001	2003	2002
Weir Farm (WEFA)	Yes	2002	2001	2000	2003	2003

Science is Critical to NPS Mission

- Recent legislation and NPS Management Policies reemphasize the importance and role of technical and scientific information.
- The Natural Resource Challenge demonstrates a renewed NPS commitment to preserving natural resources, and funds a program to obtain scientific information.
- Essential for well-reasoned and legally defensible decisions affecting parks.
- Information needed to share with the public and build constituencies.

What are Vital Signs?

Vital signs are key elements, processes, or features of the environment that can be measured or estimated AND indicate ecosystem condition.

Goals of Vital Signs Monitoring

- 1) Determine status and trends of selected indicators
- 2) Provide early warning of abnormal conditions
- 3) Provide interpretation of data to better understand condition of park ecosystems
- 4) Provide data to meet legal and Congressional mandates
- 5) Provide a means of measuring progress towards performance goals



Spotted Salamander (*Ambystoma maculatum*)

Developing a Monitoring Strategy



Painted Turtle (*Chrysemys picta*)

- 1) Form a network Board of directors and technical steering committee
- 2) Summarize existing data and understanding (**PHASE 1**)
- 3) Prepare for and hold a scoping workshop
- 4) Report on workshop and have it reviewed (**PHASE 2**)
- 5) Hold meetings to decide on priorities and implementation approaches
- 6) Draft the Network Monitoring Plan
- 7) Have Monitoring Plan reviewed and approved (**PHASE 3**)

Three-Phase Monitoring Design



The Pogue (MLBI)

- 1) Background work prior to selecting vital signs
 - * goals and objectives for monitoring
 - * synthesize existing data
 - * draft conceptual models
- 2) Selection of vital signs
- 3) Development of full monitoring plan
 - * detailed protocols and sampling
 - * database design
 - * data management plan

Included in Phase 1 Report



Redbelly Snake (*Storeria occipitomaculata*)

- Draft lists of park management issues
- Draft lists of natural resources and focal species or processes for each park
- Draft lists of known stressors
- Draft conceptual models relevant to the monitoring program
- Draft list of measurable objectives for the monitoring program
- Criteria used to rank and select indicators

Timeline for Monitoring Development



Blueberries (*Vaccinium sp.*)

- Phase 1: 1 October 2003
 - Describe formation of Board/committees
 - Present results of data summaries
 - Define monitoring goals and objectives
- Phase 2: 1 October 2004
 - Update and expand phase 1 information
 - Present results of scoping workshops to select Vital Signs
- Phase 3: 1 December 2005
 - Sampling design
 - Sampling Protocols
 - Implementation of Monitoring Program

Phased Reporting Deadlines

Network	Phase I	Phase II	Phase III	final
NCBN	10-02	10-03	12-04	10-05
NETN	10-03	10-04	12-05	10-06
ERMN	10-04	10-05	12-06	10-07
MIDA	10-05	10-06	12-07	10-08

Reporting the Results of I&M Efforts

Making Information Available for Decision-Makers, Scientists, Educators, and Constituency Groups

- Annual Administrative Report and Work Plan
- Annual Reports for specific Protocols or Projects
- Inventory Project Reports
- Analysis and Synthesis reports – trends
- Program and Protocol Review reports
- Scientific journal articles and book chapters
- Symposia, workshops and conferences
- National Report - Condition of NR in National Parks
- Websites

Threats Identified by Parks in NETN

- 1) Outside development pressure
- 2) Internal park development/actions
- 3) Exotic species
- 4) Nutrient overload; septic systems
- 5) Insects and pests
- 6) Visitor use
- 7) Coastal erosion/Global climate change
- 8) Contaminants
- 9) Acid deposition
- 10) Catastrophic events



Blueberries (*Vaccinium* sp.)

Benefit to Parks within the Network

Data and Information organization, analysis, and dissemination.



Wood Frog (*Rana sylvatica*)

Providing funding and support to develop partnerships with cooperators to conduct inventories, develop monitoring protocols, and implement monitoring.

Work towards achieving Natural Resource Challenge to track "Vital Signs" over time.

Vegetation Mapping Program

Program Goal: Provide comprehensive vegetation information at national and regional levels

- Program began 1994 (ASIS one of first)
- Founded on good science
- Produces digital products
- Based on a nationally-consistent, hierarchical classification scheme and written vegetation key
- Should link to fire fuels mapping and invasives?

Water Quality Monitoring

- Natural Resource Challenge funding for water quality monitoring must be used to report on the Servicewide water quality GPRA strategic goal to **IMPROVE the quality of impaired waters and MAINTAIN the quality of pristine waters.**
- Section 305(b) of the Clean Water Act requires states and others to assess and report on water quality every 2 years.
- Water quality in parks is defined by these reports. Park data assists in highlighting threats and improvements to water quality.

Water Quality Monitoring Funding

Network	2001	2002	2003	2004	2005
NCBN	X				
NETN			X		
ERMN			X		
MIDA				X	

NETN Budget Summary for FY2003

Income:		Source:
▪Water Quality Funds	\$60k	WRD
Subtotal \$60k		
▪Veg. Mapping Funds	\$90k	Veg. Mapping
▪Inventory Funds	\$122k	I&M - Inventory
▪Regional Coord.	\$21k	I&M Vital Signs
▪Monitoring Funds	\$481k	I&M Vital Signs
Subtotal \$714k		

NETN Budget Summary for FY2003

Personnel:

Regional Coord.	\$24k	I&M Vital Signs
Network Coord.	\$60k	I&M Vital Signs
Data Manager	\$50k	I&M Vital Signs

Subtotal \$134

Cooperative agreements (developing Phase 1):

Data mining	\$100k	I&M Vital Signs
Forest monitoring	\$80k	I&M Vital Signs
Exotics Inventory	\$22k	I&M Inventory
Mammal Inventory	\$100k	I&M Inventory
Veg. Mapping	\$40k	I&M Vital Signs
Veg. Mapping	\$90k	Veg. Mapping

Subtotal \$432k

NETN Budget Summary for FY2003

Operations/Equipment:

Equipment	\$20k	I&M Vital Signs
Moving Expenses	\$35k	I&M Vital Signs
Scoping Workshops	\$65k	I&M Vital Signs

Subtotal \$120k

Travel:

Travel	\$30k	I&M Vital Signs
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Subtotal \$30k

Things to Keep in Mind

- We are starting with a core program with shared personnel and funding - plan for future growth
- Use funding for leveraging, cost sharing; augment with existing park staff, park base, partnerships
- Demonstrate that data are useful for managing park resources and meeting the NPS mission
- Partnerships are key to designing and building an integrated program
- If more people use the data, there will be more support for the program. Share the results widely!

Comparison of Network Charters

Network	# Parks	# Supt.s	Board of Directors					Chairperson	Term	Member Selection	Mtg.s /Yr	Decision Making
			Chiefs	Rep. Scientist	Rep. I&M Coord.	Rep. Park Coord.	Other					
Appalachian Highlands	4	4	1	1	1	1	1	Superintendent	2 yr.	Appointed by position	4	Consensus
Central Alaska	3	3	1	1	1	1	1	Elected from members	open	Appointed by position	1	Unanimous
Cumberland/Piedmont	14	5	1	1	1	1	1	Superintendent	2 yr.	Elected & Permanent	1	Consensus
Greater Yellowstone	4	6	2	1	1	1	1	Chief	2 yr.	Appointed by position	2	Majority
Heartland	15	3	1	1	1	1	1	Did not specify	?	Did not specify	1	Majority
Mediterranean Coast	3	3	1	1	1	1	1	No officers		Appointed by position	2	Consensus
National Capital	11	11	1	1	1	1	1	Superintendent	?	Appointed by position	2	Majority
North Coast and Cascades	7	7	1	1	1	1	1	No officers		Appointed by position	2	Consensus
Northwest Coastal and Barrier	8	7	2	1	1	1	1	Did not specify	?	Appointed by position	1	Consensus
Northern Colorado Plateau	16	5	1	1	2	1	1	Superintendent	2 yr.	Did not specify	1	Consensus
San Francisco Bay	6	4	1	1	1	1	1	No officers		Did not specify	2	Consensus
Sonoran Desert	11	3	3	1	1	1	1	Elected from members	open	Elected & Permanent	2	Consensus
	41/EM	100%	Denotes Ex-Officio Member									